

IN THE CLAIMS:

Please write the claims to read as follows:

- 1 1. (Currently Amended) A telescope system, comprising:
 - 2 a telescope having a tube, a prime focusing mirror, and a secondary mirror on the op-

3 tical axis of the telescope to form a real image behind the telescope, the prime focusing mir-

4 ror located at a first end of the tube;

5 a fork mount, the fork mount having a base and a first arm extending from a first end

6 of the base and a second arm extending from a second end of the base;

7 an axle to rotate the fork mount along a first axis perpendicular to the base and paral-

8 lel to the arms, the base rotating about a location midway between the two arms, to cause the

9 fork to rotate in right ascension when the axis points toward a celestial pole;

10 rotatable attachments to permit rotating the tube in a plane midway between the two

11 arms of the fork mount, the plane substantially perpendicular to the base of the fork mount, to

12 cause the tube to rotate in declination when the axis points toward a celestial pole;

13 a 45 degree angle reflector to deflect the optical axis of the telescope by 90 degrees so

14 that the real image is formed on a line perpendicular to the optical axis of the telescope tube,

15 the 45 degree angle reflector attaching to external threads at the first end of the telescope

16 tube;

17 a cylindrical coupling member mating at a first end with a downstream opening of the

18 45 degree angle reflector ~~deflector~~, and a threaded coupling at a downstream end of the cy-

19 lindrical coupling member;

20 a field adjuster, the field adjuster attached to the threaded coupling of the cylindrical
21 coupling member; and

22 a CCD camera attached to a downstream end of the field adjuster, wherein the field
23 adjuster and the CCD camera clear the base of the fork mount when the telescope is in the 90
24 degree declination position.

1 2. (Original) A telescope system as in claim 1, further comprising:

2 a smooth internal mating surface in the downstream end of the 45 degree angle re-
3 flector;

4 a smooth external mating surface in the first end of the cylindrical coupling member,
5 the smooth external mating surface fitting into the smooth internal mating surface of the 45
6 degree angle reflector.

1 3. (Original) A telescope system as in claim 2, further comprising:

2 a grove in the cylindrical coupling member;

3 a setscrew in the 45 degree angle reflector, the setscrew mating with the grove to hold
4 the cylindrical coupling member securely in place.

1 4. (Currently amended) A telescope, comprising:

2 a tube, a prime focusing mirror, and a secondary mirror to form a real image behind
3 the telescope;

4 a fork mount having a base and a two arms extending to hold the telescope tube;

5 a 45 degree angle reflector deflects light from the telescope by 90 degrees, the 45
6 degree angle reflector attaching to external threads at an end of the telescope tube;

7 a cylindrical coupling member mated at a first end with a downstream opening of the
8 45 degree angle reflector ~~deflector~~, and having a threaded coupling at a downstream end of
9 the cylindrical coupling member; and

10 a CCD camera attached to a downstream end of the cylindrical coupling member, so
11 that the CCD camera clears the base of the fork mount when the telescope is in the 90 degree
12 declination position.

1 5. (Original) The telescope as in claim 4, further comprising:

2 a field adjuster, the field adjuster attached to the threaded coupling of the cylindrical
3 coupling member at a first end, and the field adjuster attached at a second end to the CCD
4 camera.

1 6. (Original) A telescope system as in claim 5, further comprising:

2 a smooth internal mating surface in the downstream end of the 45 degree angle re-
3 flector;

4 a smooth external mating surface in the first end of the cylindrical coupling member,
5 the smooth external mating surface fitting into the smooth internal mating surface of the 45
6 degree angle reflector.

1 7. (Original) A telescope system as in claim 6, further comprising:

2 a groove in the cylindrical coupling member;

3 a setscrew in the 45 degree angle reflector, the setscrew mating with the grove to hold
4 the cylindrical coupling member securely in place.

1 8. (Currently Amended) A telescope system, comprising:

2 a telescope having a tube, a prime focusing mirror, and a secondary mirror on the op-
3 tical axis of the telescope to form a real image behind the telescope, the prime focusing mir-
4 ror located at a first end of the tube;

5 a fork mount, the fork mount having a base and a first arm extending from a first end
6 of the base and a second arm extending from a second end of the base;

7 an axle to rotate the fork mount along a first axis perpendicular to the base and paral-
8 lel to the arms, the base rotating about a location midway between the two arms, to cause the
9 fork to rotate in right ascension when the axis points toward a celestial pole;

10 rotatable attachments to permit rotating the tube in a plane midway between the two
11 arms of the fork mount, the plane substantially perpendicular to the base of the fork mount, to
12 cause the tube to rotate in declination when the axis points toward a celestial pole;

13 a 45 degree angle reflector to deflect the optical axis of the telescope by 90 degrees so
14 that the real image is formed on a line perpendicular to the optical axis of the telescope tube,
15 the 45 degree angle reflector attaching to external threads at the first end of the telescope
16 tube, and a smooth internal mating surface in the downstream end of the 45 degree angle re-
17 flector;

18 a cylindrical coupling member mating at a first end with a downstream opening of the
19 45 degree angle reflector ~~deflector~~, and a threaded coupling at a downstream end of the cy-
20 lindrical coupling member, a smooth external mating surface in the first end of the cylindri-

21 cal coupling member, the smooth external mating surface fitting into the smooth internal
22 mating surface of the 45 degree angle reflector, and a grove in the cylindrical coupling mem-
23 ber and a setscrew in the 45 degree angle reflector, the setscrew mating with the grove to
24 hold the cylindrical coupling member securely in place.

25 a field adjuster, the field adjuster attached to the threaded coupling of the cylindrical
26 coupling member; and

27 a CCD camera attached to a downstream end of the field adjuster, wherein the field
28 adjuster and the CCD camera clear the base of the fork mount when the telescope is in the 90
29 degree declination position.